

# THE COMMUNITY-DRIVEN REVIVAL OF BARREN LANDS FOR SUSTAINABLE LIVELIHOODS

Kapil Lal





The Integrated Livelihood Support Project has piloted an initiative in the state of Uttarakhand, in northern India, to facilitate the enhancement of farmer livelihoods by cultivating abandoned land holdings in the area. Through a participatory approach, the project has helped farmers come together to develop and maintain communal orchards, increasing their personal incomes and that of the wider community.

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The hills of Uttarakhand are characterised by small and fragmented landholdings; the average size of a plot in the state is about 0.68 hectares, which is distributed into several patches. This is much smaller than the national average of 1.16 hectares per farmer. Communities face adverse conditions as the region is prone to natural disasters like earthquakes, flash floods and landslides.

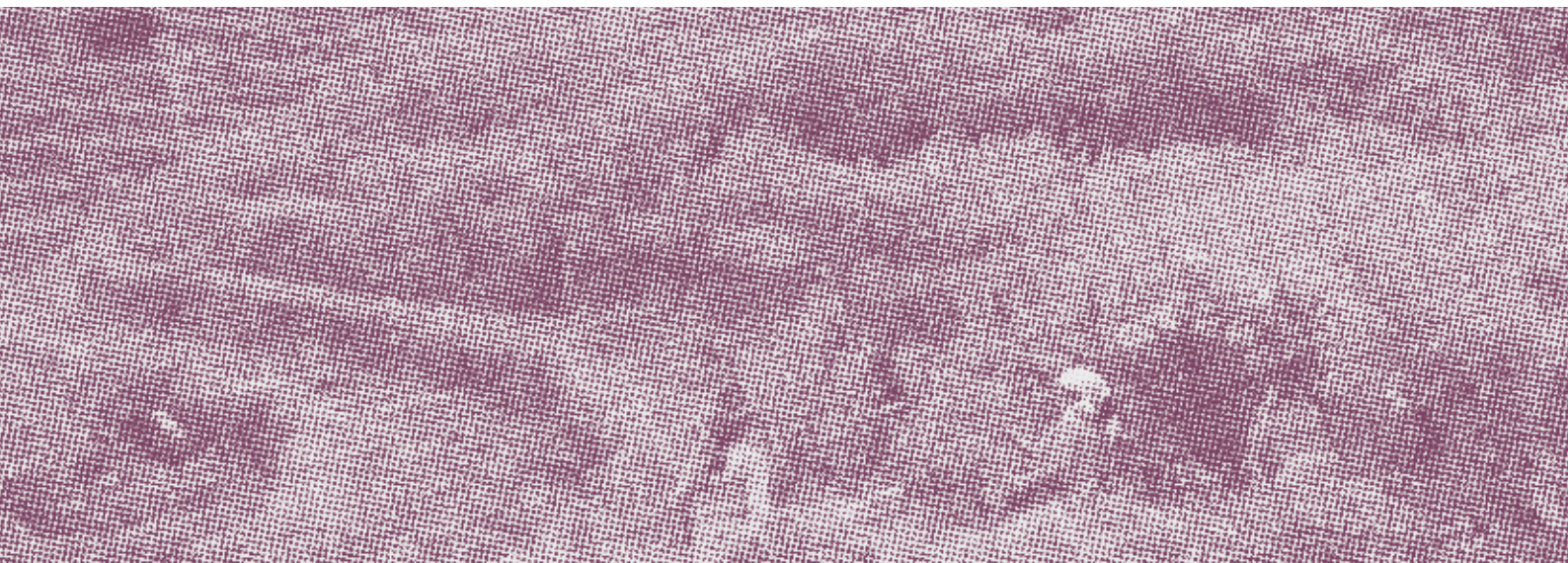
The Integrated Livelihood Support Project (ILSP) was launched by the Government of Uttarakhand and the International Fund for Agricultural Development (IFAD) in 2012, with most activities starting in 2014. With the main objective of reducing poverty by developing the livelihoods of the villagers in 22 micro watershed areas, the ILSP project was designed as a participatory initiative involving all community members. Under the project, the community has decided and planned the development activities to be carried out by the *Gram Panchayat* (village council) of the area. A *Gram Panchayat* watershed development plan was prepared, which lists the different activities decided by the community and the budget allocated for each activity. Along with the general watershed activities, priority was given to sustainable agriculture practices, such as crop rotations, the use of cover crops or the application of an Integrated Pest Management approach – working to increase livelihood options at the producer group level. The *Gram Panchayat* of the

Maroda village, in the district of Pauri, proposed the establishment of a collective pomegranate orchard in the untended and abandoned lands of the village, as a way to develop an income-generating resource. The ILSP project team facilitated this initiative by providing technical support and guidance through farmer training sessions and village meetings.

The present case study provides a review of the innovative efforts of the Maroda *Gram Panchayat* to produce a pomegranate orchard for farming, and presents the collective approach followed by the village community for regenerating the abandoned barren lands of the village, and the effect this has had on the district as a whole. For a better representation of the case, efforts have been made to describe the initiative taken by the community to enhance their livelihood situation by sustainably using their resources, and by slowing down the migration rates.

### **A difficult situation**

The outward migration of farmers from the village is a result of the fragmentation of landholdings and also of the environmental degradation which has led to water and food scarcity. These are problems affecting the viability of agriculture and of the livestock-related livelihood options that are still the mainstay of the district's economy.



Farming families cultivate crops on limited land holdings to fulfill their family needs, which results in increased areas of fallow land in the region. (Farmers usually cultivate the lands which are nearer to their homes, leaving other holdings as fallow.) Due to large areas of land going untended, conflicts between humans and animals have arisen. The population of wild boars and monkeys has increased, and many animals stay in parts of the abandoned land, making farming more difficult. Leopards and prey alike are using the wild vegetation that has infested the vacant farmlands to provide camouflage (especially shrubs like *Lantana* and *Parthenium*), increasing the risks farmers face when venturing onto the abandoned lands.

Maroda is one of the villages in the Pabo block of the Pauri district – the block most affected by the presence of leopards and by their attacks to humans and livestock – and is classified as a high conflict zone because of this.



### ***From fallow to orchards***

The landholdings in the hilly regions of Pauri are fragmented and the entire patch of land is not available in one cluster; so there is therefore scope for collective community efforts for horticulture-based interventions, and for the promotion of a cluster-based approach for collective production and marketing. The selected area for the establishment of a collective orchard was identified, covering the barren lands of 80 farmers in the village. This made a total of 8 hectares.

This collective approach was needed to allow the village community to work together and reap the bulk harvest, and provide a social platform whereby they are able to share their day-to-day chores, whilst at the same time being more sociable. This initiative helped establish the orchard and all land preparation activities to be carried out in a collective manner, as the workload was equally divided amongst all land owners.

The steps followed were as follows:

**1. Problem identification.** After the project inception process, a series of participatory rural appraisal (PRA) exercises were carried out with the help of the community to identify different problems, issues and possibilities regarding the natural resources and agriculture. The main problems found included the scarcity of water for irrigation, the scarcity of fodder, or the need for better cultivation practices.

**2. Community mobilisation and decision making.** The head of the village council or *Gram Panchayat* for Maroda, Mr Prabhudayal Singh, took the lead in his village by outlining the main activities with all community members, starting to work in June 2015.

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*Above Community members clearing the site for the plantation*

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*Bottom right Mulching around the Plants*



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**3. Identification of site and beneficiaries.**

The hamlet of Bhandaru Tok comes under the Maroda *Gram Panchayat* and covers an area of 8 hectares. This particular area belongs to 80 families living in Maroda. This was the site suggested for cultivation, and then selected by the *Gram Panchayat* and the community.

**4. Layout design.** The orchard layout design was prepared by the community, facilitated by the multi-disciplinary team at ILSP. Pits were dug with a depth of 60-70 cm, with a spacing of 5 x 5 m. The planting distances recommended were 4 x 4 or 5 x 5 m.

**5. Land preparation.** The entire patch of land was covered with Lantana and Parthenium shrub species and other weed; it took 8 days to clear the entire area by the community under the leadership of the *Gram Pradhan*. Once cleared, the community made pits and planted the pomegranate saplings.

**6. Manuring.** Farmyard manure and a single super phosphate fertiliser was applied to the dugout pits. Insecticides were also used on the saplings to prevent the infestation of ants and termites.

**7. Planting material.** In August 2015, the community planted 2,000 saplings of the Bhagwa variety, high quality tissue culture plant. The ILSP team facilitated the procurement of these saplings.

**7. Mulching.** Since the area was barren for decades, all cultural activities were difficult, and weeding and maintenance was necessary. The application of mulch provided many benefits: it helped reduce the costs of weeding, while increasing and retaining soil moisture level by reducing the evapotranspiration levels. This helped plant growth, especially during the dry season.

**9. Irrigation.** Irrigation water was collected from the perennial water source located 900 m away from the project area in low density polyethylene (LDPE) tanks. With tanks at different locations across the land, this effort provided supplementary irrigation for the entire farm – with a total of 75,000 liters available. A low cost gravity-based drip irrigation system was used in the farm in order to increase efficiency.

**10. Watch and ward.** In order to support and increase the community's efforts to reap a good harvest, the project provided barbed wire fencing to prevent any possible damage caused by wild boars, monkeys and other animals.

**11. Training.** Last, and focusing on the need to develop specific skills, the team also organized an onsite pruning training course, with many villagers joining.



## Results

The ISLP pilot project focused on the development of a collective orchard in the region. On seeing the orchard development success, farmers from neighbouring villages showed interest in developing their own collective orchards. As a result, in 2016, 26 hectares of barren land across the villages of Bidoli, Maroda, Masso Masshetha, Masso Thapliyal and Ulli were also brought under collective management.

The pilot project started with the main objective of providing a livelihood opportunity to the community. Though the first commercial harvest of the plantation will only take place later in 2018, the outcomes of the initiative are already clear. What was known as “wastelands” are now productive fields. It is also possible to say that the region has seen a shift from subsistence farming to commercial farming. Through the restoration of these barren lands, the shrubs and

resilient weeds are being removed, and the hiding spaces for wild animals has reduced. The project has helped to lower the risk and occurrence of animal attacks.

And there is also a higher degree of cooperation between community members who are now working collectively. The project has seen the establishment of a livelihood collective under the name of *Mohyar Ajeevika Swayatt Sehkarita*, which was registered under the Self Reliant Cooperative Act of 2003. This is already helping farmers market their products, providing additional labour opportunities.

The organization of a Participatory Rural Appraisal exercise helped by highlighting the major challenges in the area, and helped understand the nature of the decision making processes in the area and the factors influencing this. The regular visits paid by the ISLP team helped guide the whole process.

*Above Community members using weeder to clear site*

**Table 1:** Village name, area of land, and type of plantation developed for collective farming in 2016.

Name of village	Plantation	Barren area selected for community orchard
<b>Maroda</b>	Pomegranate	8 ha
	Walnut	5 ha
<b>Ulli</b>	Walnut	5 ha
<b>Bidoli</b>	Pomegranate	2 ha
<b>Masso Masshetha</b>	Pomegranate	3 ha
<b>Masso Thapliyal</b>	Pomegranate	3 ha
<b>Total</b>		<b>26 ha</b>



# Though the first commercial harvest of the plantation will only take place later in 2018, the outcomes of the initiative are already clear.

*Right Onsite training course*

*Bottom right First year bloom in the planted pomegranate plants*

## Conclusions

This initiative has shown how much is possible when community members come together and work to enhance their livelihoods. Their model of collective orchard farming on abandoned land can be an example for the entire state. Agriculture in the hilly region of Uttarakhand is mainly fragmented into small land holdings. However, through collective farming, the threats of climate risk and the non availability of labourers for farm operations can be drastically reduced.

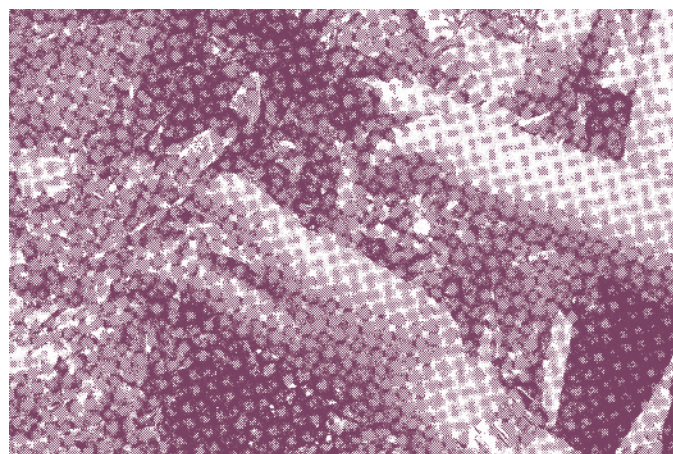
The process has begun in earnest but the production of pomegranate and walnut is not sufficient to significantly enhance the livelihoods of a farming community. Village members are therefore also thinking of developing processing units at the *Gram Panchayat* level, which will help them obtain higher incomes. In the meantime, the new cooperative is helping them market their products – a necessary step in their path to self-sufficiency.



### Kapil Lal

Kapil Lal is Director of the Integrated Livelihood Support Project (ILSP). Uttarakhand, India.

*E-mail: [pdilsp-wmd.uk@gov.in](mailto:pdilsp-wmd.uk@gov.in)*



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